

# Some Fishes Hitherto Unknown From South Australian Waters

By

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## FAMILY SCYLIORHINIDAE. CEPHALOSCYLLIUM ISABELLA.

(*Bonnaterre*).

Color Plate, Top Figure.

The little Swell Shark resembles a Carpet Shark rather than the Cat-fishes of its family. Specimens have been taken previously in Victoria, Tasmania, and New Zealand, but the species was not known from South Australian coasts until June 22, 1931, when Mr. E. A. Sheridan found a full-grown female



Egg of Swell Shark (*Cephaloscyllium isabella*).

in one of his crayfish pots, one and a half miles W.S.W. of Cape Catastrophe, in sixteen fathoms of water. Mr. Sheridan placed the fish in the well of his fishing cutter, and there it laid the egg shown in the figure.

Mr. C. P. Whitley (Ichthyologist at the Australian Museum) once held the opinion that this shark deposited a ribbed, or laminated, egg (Rec. Aust. Mus., XVIII, 1932, p. 323). In a recent paper dealing with the eggs of Australian sharks and rays (Australian Museum Magazine, VI, 1938), however, he recalls the fact that a "laminated egg" was figured, unidentified, by Dumeril in 1865, and goes on to refer it provisionally to a species of *Parascyllium*. At the same time, he identifies a smooth-surfaced egg as belonging to the Swell Shark. This conjecture was proved incorrect by the captive South Australian Swell Shark, which deposited a "laminated egg." These transversely ridged eggs are occasionally washed up on the shores of St. Vincent Gulf, so that the species is probably not as rare as one might suppose.

The female Swell Shark captured by Mr. Sheridan was 2 ft. 10½ in. (370 mm.) in length. Photographs and color sketches of the living animal were made at the Museum. The coloration of the dorsal surface was chestnut-brown with the top of the head somewhat paler, and with a narrow paler band extending from the posterior edge of the eyes to just behind the spiracles; similar bands were present posterior to the pectoral fins, in the neighborhood of the ventrals, between the dorsal fins, and between the second dorsal and the caudal fin. The underside was cream-colored, with brown mottlings, accentuated about and behind the mouth, in front of the vent, and on the tail and distal portions of the ventral fins. The general coloration may be described as dark: both fins and body are marked with dark spots and there are sparse irregular spottings of white. The base of the anal fin is subequal in length to its distance from

the origin of the lower caudal lobes. The distance from the snout to the first gill-slit is less than one-sixth of the total length and equals the distance between the origin of the dorsal fins; that is to say, the distance from the snout to the origin of the pectorals is equal to that from the origin of the first dorsal and the end of the second dorsal fin.

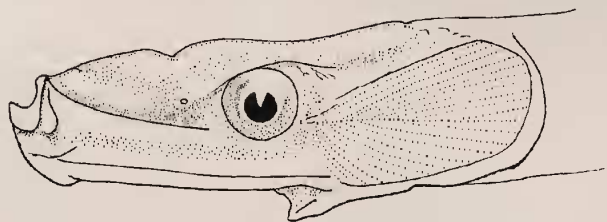
A smaller female was captured by Mr. McDowall in deep water south of Kangaroo Island on March 8, 1929. This specimen laid two laminated eggs, similar to the one illustrated, in the well of Mr. McDowall's boat.

In colouration, this example was not so red-

into the head; eye 2.3 into the snout and nearly 7 into the head. Trunk subequal in length to tail. Caudal fin 2.5 in head.

Snout 1.75 in rest of head; dorsal crest bisinuate, with a marked incision in advance of eye; supraorbital ridges not continued into dorsal outline of head.

Body with eight ridges; crest of the snout continued as a low ridge on to the second (or pectoral) annulus, where it fades out, but recontinues on the fourth annulus and extends thence to the anterior end of the dorsal fin; the latero-superior ridges end underneath the twentieth dorsal fin ray; the medio-lateral ridges end on the last thoracic annulus beneath the anterior



Head of *Histiogampelus maculatus*.

dish as that captured by Mr. Sheridan, and possessed more small black spots, while the banding was quite indefinite. The base of the anal fin is almost equal to the distance between the posterior insertion of the pectoral and its own origin, and is distinctly longer than its distance from the origin of the lower caudal lobes. The distance from the snout to the first gill-slit is almost one-sixth of the total length, and is equal to the distance between the origins of the fins.

In regard to the breeding season of the species in South Australia, it may be noted that the freshly laid egg of a Swell Shark was cast up at Cape Thevenard on October 12, 1934, and another with a young shark inside was found at Coffins Bay in September, 1936.

FAMILY SYNGNATHIDAE.  
*HISTIOGAMPHELUS MACULATUS*  
*sp. nov.*

Color Plate Bottom Figure and Text Figure. Female. Dorsal fin with 24 rays; pectoral with 12 rays; caudal with 8 rays. Thoracic annuli 20; tail rings 33. Subdorsal annuli 5 + 2.

Head about five times into length of trunk and ten times into total length: snout 2.75

ends of the upper caudal ridges; a prominent abdominal ridge. Tail square in section with four ridges. Anal fin minute and caudal spear-shaped.

Color: Reddish-brown, tinged with orange on postero-lateral parts of thorax; thoracic annuli with bold atrocereulens spots disposed as shown in the color illustration and with a sparse sprinkling of minute pearly dots on the upper part. On the anterior half the underside of the tail is pale brownish-orange, with darker mottlings and with a prominent white spot on the sixth and ninth rings: these spots extend on to the lateral faces of the annuli; on the hinder half the venter is dark brown.

Length: 265 mm.

*Loc.*: South Australia, Gulf St. Vincent, Aldinga Bay (J. D. McDonald, Dec., 1938).  
*Type*, female, in South Australian Museum.  
*Reg. No.* F.2039.

*H. maculatus* may be separated at a glance from the only other species of the genus hitherto recorded from South Australia--*H. rostratus* Waite and Hale—for the last-named has the snout twice as long as the rest of the head.

The new species resembles *H. briggsii*



FISHES NEW TO SOUTH AUSTRALIA.

Top: *Cephaloscyllium isabella* (Bonnaterre).

Middle: *Cridorsa moonta* Whitley.

Bottom: *Histiogamphelus maculatus* sp. nov.

McCulloch in some respects, but differs in having the snout relatively much shorter, with the crest bisinuate and the low ridge defining the upper edge of the snout not subparallel to the dorsal margin of the crest; in having the supraorbital ridges separated from the profile, in the lesser number of annuli, etc. The coloration also is distinctive and entirely different.

FAMILY NOMEIDAE.  
*CRIDORSA MOONTA* (Whitley).

Color Plate, Middle Figure.

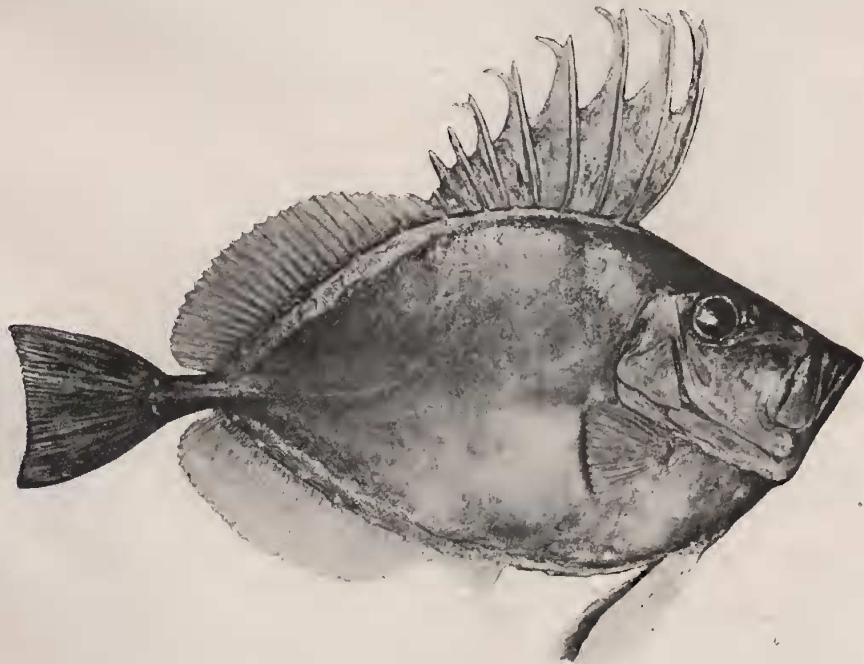
On March 4, 1938, a small unknown fish was caught by Mr. H. Kemp at Moonta Bay and was sent by him to the Museum for identification. As it was quite unlike any member of the family previously recorded from Australia, a colored drawing was at once made of the fresh specimen, and this is reproduced herewith. The fish was then sent to Mr. G. P. Whitley, of the Australian Museum, for description, and in the current number of the "Records of the South Australian Museum" that author proposes the new genus *Cridorsa* for its reception. (Rec.

S.A. Mus., VI, 1938, p. 159, pl. XVI). The striking coloration of the species is shown in the plate herewith. The length of the fish is 2.2 inches or 45 mm.

FAMILY ZEIDAE.  
*ZENOPSIS NEBULOSUS* (Temminck and Schlegel).

This striking fish is known as the Mirror Dory because of its silvery body and sub-circular shape. It is a deep-water species and has been found in the seas of Japan, New Zealand, Victoria, Tasmania, and New South Wales; it is taken by deep-sea trawlers of our eastern States, but was unknown in South Australia until June, 1933, when the example illustrated (1 ft. 6 $\frac{3}{4}$  in. or 475 mm.) was hooked by a fisherman near Kangaroo Island. The photograph is of the cast exhibited in the Museum.

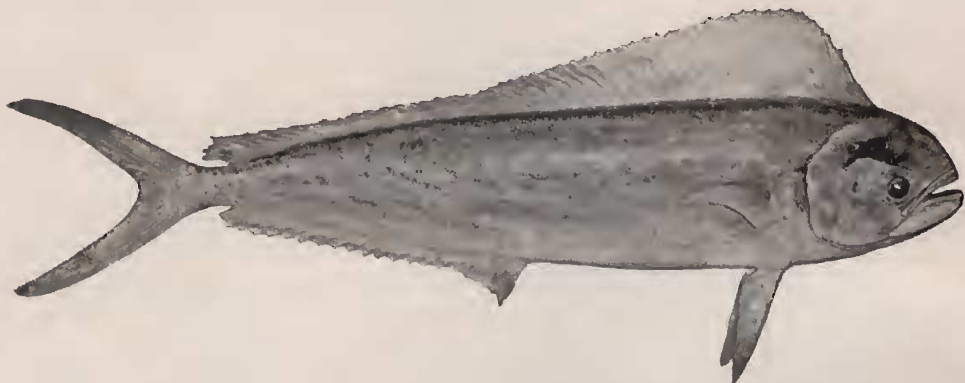
FAMILY CORYPHAENIDAE.  
*CORYPHAENA HIPPURUS* (Linnaeus).  
The Dolphin or Dorada inhabits the open ocean and is found in all warm seas. Modern sailors have misapplied the name "Dolphin" to this fish, and it must not be confused, of



Mirror Dory (*Zenopsis nebulosus*).

course, with the true Dolphins or porpoises, which are mammals. Although in Australia it has been recorded from New South Wales, there has been no record of its occurrence in the inshore waters of Southern Australia. The first example to be noted in our State was taken at Port Wakefield, right at the shallow northern end of St. Vincent Gulf; it was 3 ft. 4 in. in length and was caught

tribution in both hemispheres, but has rarely been taken in Australian seas. The species attains a length of six feet, and it is sometimes thrown up on beaches in New Zealand in considerable numbers. It is said that specimens are usually stranded during cold frosty weather and that this fact is responsible for the popular name, "Frost fish," in New Zealand.



"Dolphin" (*Coryphaena hippurus*).

by Mr. G. W. Forrest on February 1, 1931. The coloration was described as "bright azure blue" when freshly caught. Only portions of this specimen were preserved.

*Coryphaena* appeared again in St. Vincent Gulf on January 7, 1938, when a fisherman (Mr. Swayne) hooked one of a number of individuals; this example was 2 ft. 4½ in. (720 mm.) in length, and a plaster cast was made from it for exhibition in the Museum.

#### FAMILY TRICHIURIDAE.

##### LEPIDOPUS CAUDATUS (*Euphrasen*).

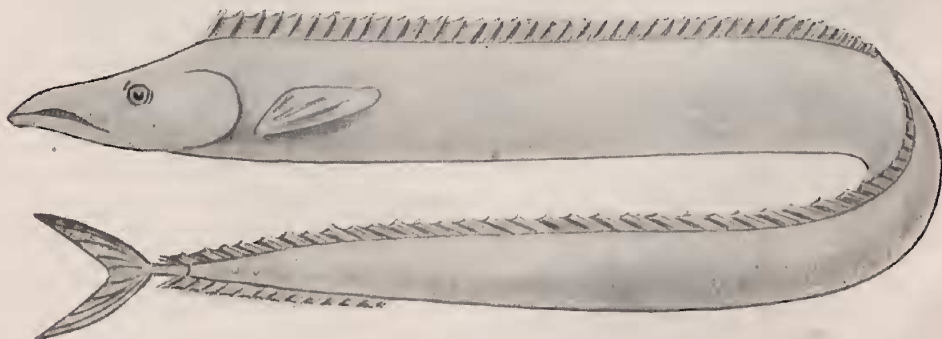
The striking Scabbard-fish has a wide dis-

A fine example, 5 ft. 4½ in. (1,640 mm.) in length, was collected at Glenelg in St. Vincent Gulf by Mr. C. Jordan on August 15, 1931. A cast of this specimen is exhibited in the Museum.

#### FAMILY SCORPAENIDAE.

##### NEOSEBASTES PANDA (*Richardson*).

Richardson, the author of the species, gave this fish the popular name of "Saddle-skull Scorpaena." It occurs in Western Australia, Victoria, and Tasmania, but has not been definitely recorded previously from South Australia. Waite included the species in his



Scabbard-fish (*Lepidopus caudatus*).

"Catalogue of Fishes of South Australia" (1921, p. 64) because it had been taken in the Great Australian Bight (see his Catalogue, p. 1, par. 2) west of Encla ("Endeavour" Sci. Res., III, 1915, p. 154) and in Victoria; he then stated that *N. panda* is "not so well known here as in Victoria, where it is a common market fish." In his later handbook, "The Fishes of South Australia" (1923, p. 189) Waite remarks: "This is a Western Australian fish and has been taken in the Bight; it is not known

how far it extends eastwards." In his "Checklist of Australian Fishes," McCulloch omits South Australia as a locality for the species (Mem. Aust. Mus., V, 1930, p. 386) doubtless because he was aware that its inclusion in Waite's catalogue was based on the west of Encla record. It is desirable to clear up this point because *N. panda* is not uncommon in our State and individuals are preserved in the South Australian Museum from a number of localities in both Spencer and St. Vincent Gulfs.

## Rare Whales in South Australia

By

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### FAMILY ZIPHIIDAE.

During the last six years eleven Beaked whales have been stranded on South Australian beaches. It is highly improbable that this represents the total number which have come to grief on our southern shores during that period. When one considers the three to four hundred miles of almost deserted and rock-bound coastline of the eastern half of the Great Australian Bight, comprising the western portion of the sea-line of South Australia, the Ninety-mile Beach opposite the Coorong in the south-east, and other lonely stretches, it seems certain that many whales may have been cast up and never seen. Again, small stranded whales may have been observed by local residents in isolated districts but not reported. Almost without exception, the smaller whales have been identified by fishermen as the common Black-fish (*Globiocephala melaena*), and regarded as of limited interest.

The Beaked Whales previously recorded, and those mentioned below, were all cast up during the summer, seven of a total of fourteen individuals being stranded in the month of February and five in January.

### PORPOISE WHALE.

#### BERARDIUS ARNUXII (*Duvernoy*).

About a dozen specimens of this toothed whale have been recorded from New Zealand and the Argentine. It is now possible to add the species to the known Australian fauna.

Early in January, 1936, Mr. J. J. Waters reported that he had observed a whale about half a mile from low water mark on a big sand bank about two miles south of Port Lorne, near the northern (or top) end of St. Vincent Gulf.

Mr. Waters stated that, on December 27, 1935, his boat approached to within a few yards of the whale, and he was able to make the following observations. The whale was alive, and from time to time expelled air with a low "whish"; it was moving its head from side to side, was wounded, and was bleeding, apparently from the mouth. The color of the back was black.

Mr. George E. Mardon stated that, early in January, 1936, a big sword-fish and a whale were floating in the Gulf near Port Lorne, both being then dead. The occurrence of a large wound in the side of the whale, and

Hyperoodon planifrons	1	Pt. Victoria	Nov. 1928
Berardius arnuxii	1	Pt. Lorne	Jan. 1936
Mesoplodon grayi	1	Youghusband Penin.	( <sup>1</sup> )Feb. 1931
Mesoplodon layardii	1	Kingston	Feb. 1919
"	1	Pt. Victoria	Dec. 1929
"	2	Victor Harbour	Feb. 1931
"	1	Coffins Bay	Feb. 1933
"	1	Streaky Bay	Jan. 1934
"	3	Victor Harbour	Jan. 1939
"	2	Streaky Bay	Feb. 1939

(1) According to local fishermen, this little whale had been cast up three months before it was secured by us in May, 1931.